I. INTRODUCTION

These guidelines have been prepared by the Urban Mass Transportation Administration's (UMTA) Office of Transit Assistance to provide guidance in the preparation and review of Environmental Assessments of mass transportation projects. The guidelines should help in carrying out the requirements of UMTA's "Environmental Impact and Related Procedures" recently published in the Federal Register.

UMTA has identified three classes of action that require different levels of environmental analysis and documentation. Projects are placed in one of these three classes according to the probable significance of their impacts on the human environment. UMTA has specified the type of analysis and process to follow in examining each class of action.

Class 1 actions normally have a significant impact on the environment and thus require an Environmental Impact Statement (EIS). These actions are: (a) new construction or extension of fixed guideway systems (e.g., rapid rail, light rail, commuter rail, automated-guideway transit, and exclusive busway). These projects would be expected to cause major shifts in travel patterns and land use; (b) major transit-related developments whose construction involves demolition of a large number of existing buildings, displacement of a large number of individuals or businesses, or substantial disruption to local traffic patterns.

Class 2 actions normally do not entail significant impacts on the environment and, therefore, require neither an EIS nor an Environmental Assessment. A detailed description of the proposed project and its setting is necessary to enable UMTA to verify that the proposed project is indeed a categorical exclusion. Categorical exclusions include:

1. Operating assistance to transit authorities to continue existing service or increase service to meet demand;

2. Engineering, when undertaken to define the elements of a proposal or alternatives sufficiently so that a project's benefits and impacts can be assessed;

3. Purchase of vehicles of the same type (same mode) as replacements or to increase the size of the transit fleet, if such an increase can be accommodated by existing service facilities or new facilities that themselves are within a categorical exclusion;

4. Track and railbed improvement and maintenance, when carried out within existing exclusive rights-of-way;

5. Rehabilitation or reconstruction of existing rail and bus buildings and ancillary facilities, if no additional land is required and there is no substantial increase in the size of the facility or the number of users;

6 Purchase and installation of operating or maintenance equipment to be located within the transit facility and with no significant physical impacts on areas removed from the site;

7. Installation of signs, small passenger shelters, and traffic signals, if no substantial amount of land is to be acquired or traffic disrupted;

8. Construction of new bus storage and maintenance facilities in areas predominantly zoned for industry and located on or near an arterial street with capacity adequate to handle anticipated bus traffic;

9. Advance land acquisition in which the property will not be modified, the land use will not be changed, and displacements will not occur and that is undertaken for the sole purpose of preserving alternatives being considered in the environmental process;

10. Minor road improvements, installation of curbs, widening of lanes, and intersection improvements for access to transit facilities or improvement of services;

11. Planning and technical studies that do not involve a commitment to a particular course of action;

12. Grants for training and research programs that do not involve construction; and

13. Regulations required by statute or Executive Order.

Class 3 actions are actions in which the significance of the impacts on the environment is not clearly established and for which an Environmental Assessment is prepared to determine the probable impacts. If significant impacts are uncovered during the preparation of an Environmental Assessment, an EIS is required; otherwise, a Finding of No Significant Impact is required. Class 3 actions may include, but are not limited to, the following:

1. Transit or intermodal terminals;

2. Administrative facilities;

3. Park-and-ride facilities;

4. Transit malls;

5. Auto-restricted zones and other projects that may significantly interfere with the existing flow of traffic;

6. Bus storage and maintenance facilities, except if UMTA has determined that the facility is included in Class 2 action; and

7. Projects having more than a minimal impact on land protected by Section 4(f) of the Department of Transportation Act and Section 106 of the National Historic Preservation Act.

This document describes the specific environmental analysis required for Class 3 actions. The information in these guidelines has been developed to apply to the majority of Class 3 actions. Certain special projects may, however, require different approaches to the assessment of potential environmental impacts. These special cases require coordination with UMTA.

Once UMTA has decided that an Environmental Assessment is required, the applicant will prepare the Environmental Assessment in consultation with UMTA. After reviewing the document, UMTA will direct the applicant to revise the Environmental Assessment if necessary.

The purpose of the Environmental Assessment is to provide UMTA sufficient information to allow ready determination of the proposed project's impacts on the human environment. The Environmental Assessment should alert UMTA to potential environmental impacts that may need to be addressed more fully in an EIS. The Environmental Assessment should also be written in sufficient detail to allow UMTA to issue a Finding of No Significant Impact, if such a conclusion is warranted.

The Finding of No Significant Impact, which includes the Environmental Assessment, is a formal statement by UMTA of its determination that the proposed project will not have a significant impact on the human environment and evidences compliance with the National Environmental Policy Act (NEPA).

II. PREPARATION OF THE ENVIRONMENTAL ASSESSMENT

In addressing the environmental issues affecting urban mass transportation projects, potential applicants should contact their UMTA regional office at the earliest possible stage of the project. Through this early contact, applicants will be informed of the procedures to be followed in evaluating the project's potential impacts on the environment and other related environmental requirements. Close coordination between the applicant and UMTA should be maintained throughout the environmental review process. Though much of the information included in the environmental assessment may be obtained from the applicant, ultimate responsibility for the environmental document remains with UMTA.

For Class 3 urban mass transportation projects, the applicant is required to prepare an Environmental Assessment, utilizing the information in these guidelines and following any additional direction provided by UMTA. These guidelines should be read in their entirety before the environmental analysis is begun. UMTA will use these guidelines to determine the sufficiency of the applicant's Environmental Assessment and to judge the extent and significance of the impacts described therein.

A. SCOPE OF THE ENVIRONMENTAL ASSESSMENT

The applicant, in cooperation with UMTA, will use a scoping process for Class 3 projects to achieve the following objectives:

1. Review segmentation issues to determine if the proposed action covered by the environmental document will have independent utility. "Independent utility" means that the action is useful in and of itself and not only as part of a subsequent project. If the action is part of a larger project to be implemented in increments, the larger project should be identified in the environmental document;

2. Determine which aspects of the proposed project have the potential for environmental impact;

3. Identify measures to mitigate adverse environmental impacts;

4. Identify alternatives including those that are environmentally preferable.

5. Identify other environmental review and consultation requirements that should be prepared concurrently with the Environmental Assessment.

In carrying out the scoping for an Environmental Assessment, the applicant should consult with agencies and individuals affected by the proposed project. [illegible] may aid the

applicant and UMTA in assessing the significance of impacts and developing mitigation measures or identifying environmentally preferable alternatives. A summary of the contacts made and issues resolved should be included in the Environmental Assessment.

B. OUTLINE OF THE ENVIRONMENTAL ASSESSMENT

A sample outline of an Environmental Assessment is shown below. In general the Environmental Assessment should be a concise document that accurately describes the proposed action, the need for it, the alternatives considered, and the expected environmental impacts. The Environmental Assessment should generally be 5 to 20 pages long. The results of the project's environmental analyses and consultations with appropriate agencies should be summarized. Assessment methodologies, detailed calculations, and copies of correspondence, if necessary, may be placed in a Technical Report, bound separately from the Environmental Assessment. Sometimes, related statements and findings are necessary; examples include a Memorandum of Agreement with the Advisory Council on Historic Preservation, a 4(f) Statement, a Floodplain Finding, a 404 Permit from the U.S. Army Corps of Engineers concerning discharge of fill into waters of the U.S., or a determination by the U.S. Coast Guard of the project's effect on navigation. These related statements and findings should be attached to the Environmental Assessment. The date of approval of these statements and findings should be mentioned under the appropriate impact category of the Environmental Assessment.

SAMPLE OUTLINE OF ENVIRONMENTAL ASSESSMENT

Section 1: Need for and Description of Proposed Action

Section 2: Alternatives to the Proposed Action

Section 3: Environmental Impacts

Section 4: List of Agencies and Persons Consulted

These Environmental Assessment guidelines call for a level of detail of environmental analysis consistent with the expected magnitude of the impacts of the proposed project. For example, if a preliminary review of the characteristics of the proposed project and its location indicates that there would be no significant impacts in a category such as noise, then no further detailed analysis in that category is required. Detailed analysis is required only when the potential for significant adverse impacts exist.

These guidelines require that the applicant prepare the Environmental Assessment in consultation with agencies experienced in determining specific environmental impacts, thereby making maximum use of this expertise in determining the required level of analysis. Consultation with other agencies

should be documented in writing and the conclusions summarized in the Environmental Assessment. This documentation may be included in a Technical Report.

The following material expands upon the sample outline by providing direction for the items to be included in the Environmental Assessment and the degree of detail required.

1. Section 1: Need for and Description of Proposed Action

The first section of the Environmental Assessment should provide a concise history and description of the proposed action. The need for and purpose of the project should be briefly stated. The description of the project should include a map showing land use, zoning, and buildings on the proposed site and in its immediate vicinity. The site's size and owner should be mentioned. Dimensions, such as the size of buildings and other facilities to be constructed, the number of parking spaces required, and the number of transit vehicles to be accommodated, should be described, as should the status of the proposed project as a new or replacement facility. This section of the Environmental Assessment should state whether the proposed project is a component of a larger project and whether other major projects are located in the vicinity. All elements of the project should be detailed and elements that will mitigate or enhance the project's effect should be described. The inclusion of such mitigation measures in the Environmental Assessment constitutes a commitment by UMTA and the applicant to adopt those measures if the project is approved. It should be noted that UMTA funds are available to pay for the mitigation specified in the Environmental Assessment.

2. Section 2: Alternatives to the Proposed Action

As part of the environmental assessment process, appropriate alternatives to the proposed action should be developed and studied. The Environmental Assessment should briefly discuss reasonable alternatives and their environmental impacts. Alternatives that should be discussed include alternative locations and designs; alternatives with different characteristics, but that may achieve similar benefits and are preferable from an environmental standpoint; alternatives not within the jurisdiction of UMTA, if appropriate; and the "do-nothing" alternative. An an example, location alternatives would include various sites for a bus garage or transit mall. Design alternatives would encompass modifications of the project to mitigate environmental impacts. Alternatives that are different in character might include promotion of carpools and staggered work hours, rather than an increased bus fleet or a new garage. An alternative outside UMTA's jurisdiction might be construction of a downtown parking garage, rather than construction of park-and-ride lots in the suburbs.

The Environmental Assessment should document the decision process that led to selection of the proposed project. The reasons for preference of the proposed action over the other alternatives should be briefly discussed.

3. Section 3: Environmental Impacts

The potential impacts of the proposed project should be briefly described in this section of the Environmental Assessment. Impacts in each of the 19 categories described later in these guidelines should be assessed and reported.

Only the results of analysis should be included in the Environmental Assessment; background information, descriptions of methodologies, and copies of correspondence may, if necessary, be placed in a Technical Report. The Environmental Assessment should identify the approach that was used and state the results.

4. Section 4: List of Agencies and Persons Consulted

Section 4 of the Environmental Assessment should contain a list of governmental agencies and individuals consulted during the assessment process. Any public information techniques employed (e.g., newspaper articles, public forums, public meetings, speakers' bureaus, citizen or technical advisory committees) can be described in this section.

III. ENVIRONMENTAL IMPACTS

The environmental impacts of the proposed action should be assessed for each of the 19 impact categories discussed below and reported in Section 3 of the Environmental Assessment. Each of the impact categories is accompanied by a table that can be used to evaluate the significance of potential impacts.

A. LAND ACQUISITION AND DISPLACEMENTS

Urban mass transportation projects should be evaluated to determine whether they would require acquisition of land or would result in displacements. If a project would require neither acquisition of land nor displacements, no further analysis in this category is necessary.

If acquisition of land is required, the important characteristics of the land (size, shape, ownership, value, location, use, number and condition of structures, status as occupied or vacant) should be summarized in the Environmental Assessment. The method by which the land would be acquired and the necessity of condemnation procedures, if applicable, should be reported.

If the proposed project would result in displacements, additional analysis should be undertaken. The Environmental Assessment should contain a summary of the people and/or businesses to be displaced. In the case of residential displacement, the Environmental Assessment should report the number of dwelling units; the number of individuals and families and their race, age, income level, and tenure (owner or renter); and the number of elderly and handicapped residents, as well as their willingness to sell and/or relocate. The agency responsible for relocations should be contacted to determine the availability of housing for displaced persons. Information gained by this contact should be included in the EA.

Similar information should be reported for displacements of businesses--size, type of ownership, number of employees, tenure, ownership by minority group, availability of adequate replacement facilities, and their willingness to sell and/or relocate. Relocation procedures for programs sponsored by UMTA are guided by UMTA Circular 4530.1 (March, 1978), which should be consulted as a reference. The availability of adequate, decent, safe, and sanitary housing available on an open occupancy basis and at costs affordable by displacees, should be stressed in the EA.

Table A can be used to evaluate the significance of potential acquisition of land and displacements.

B. LAND USE AND ZONING

The Environmental Assessment should include a map showing the existing land uses of the proposed project site and adjacent properties (Section 1). The project should be reviewed with the local land use planning agency to determine its compatibility with surrounding land uses. If the project would not be compatible with surrounding land uses, the Environmental Assessment should

TABLE A

SIGNIFICANCE OF ACQUISITIONS AND RELOCATIONS REQUIRED

Generally Not Significant	Possibly Significant	Generally Significant
1. Acquisition of land is not required.	1. Acquisition of privately-owned land is required and would result in relocation of 1 to 10 residences and/or businesses.	1. Acquisition of privately-owned land is required and would result in relocation of ten or more residences and/or businesses.
2. No displacements would result from implementation of the proposed project.	2. Replacement facilities matching the needs of the displaced households and businesses are not available in the same or nearby neighborhoods.	2. Adequate replacement facilities for displaced households and businesses are not available.
		3. Housing sites and/or funds to construct replacement facilities are not available.
		4. Replacement facilities are available, but are located in neighborhoods with which the residents of displaced households are not familiar.
		5. Replacement facilities exceed the financial capability of displaced households.
		6. Relocation of businesses and/or industries would result in a loss of jobs or a decrease in accessibility between residences and places of employment, resulting in a loss of sales or incomes.
		7. Location of replacement facilities for businesses and industries decreases accessibility to established market areas.
		8. A comparatively large or disproportionate number of minority or elderly or low income displacements would occur.

present the expected impacts, justify the location of the proposed project as the only feasible one, and describe planning measures that will be undertaken to minimize impacts. If the proposed project is not compatible with surrounding land uses that are "non-conforming," the local land use planning agency should be contacted and asked to express its opinion concerning the proposed project's furtherance or hindrance of the attainment of land use planning goals for the area. Correspondence from the local agency stating its opinion or determination may be included in a Technical Report.

The proposed project's conformance (or lack thereof) with zoning requirements should be determined. If it conforms, no further action is necessary. If the project is not permitted by existing zoning regulations, the requirements for a change in zoning should be determined. The local planning agency should be asked whether it would support a change in zoning. Justification for the change in zoning should be presented in the Environmental Assessment.

Table B can be used to evaluate the significance of potential land use and zoning impacts.

TABLE B

SIGNIFICANCE OF IMPACTS ON LAND USE AND ZONING

Generally Not Significant	Possibly Significant	Generally Significant
1. Proposed project is compatible with surrounding land use. 2. Proposed project conforms to zoning requirements, as determined through consultation with the appropriate local agency.	Proposed project requires a change in zoning and the local land use planning agency supports the change.	1. Proposed project represents a change in land use which is incompatible with surrounding land uses. 2. Proposed project is opposed by local planning or zoning agencies or by the public for reasons related to land use.

C. AIR QUALITY

Urban mass transportation projects have the potential to affect air quality by changing the number of transit vehicles and/or automobiles at specific locations. The first step in an assessment of impacts on air quality is to judge the magnitude of expected effects on traffic, as required in Section III.K (later in these guidelines). No additional analysis is required if traffic is not expected to increase and if there will be no change in traffic patterns.

If the proposed project might result in increased auto or bus traffic, the local air quality control agency should be asked to provide background air quality data and to present its opinion of the project's expected impact on the attainment and maintenance of air quality standards. If the proposed project is located in a nonattainment area for mobile source pollutants, as designated by the U.S. Environmental Protection Agency (EPA), and if the project has the potential to affect air quality, a more detailed air quality analysis should be undertaken. A rigorous analysis is necessary if the local air quality control agency determines that the proposed project is not consistent with the State Implementation Plan or the Transportation Control Plan, or that local, state, and/or federal air quality standards might be exceeded.

Appropriate dispersion-modeling techniques should be used to calculate carbon monoxide levels when a detailed air quality analysis is undertaken. The receptors selected should include areas expected to experience maximum impact and sensitive areas (e.g., parks, areas where pedestrians are concentrated, hospitals, homes for the elderly). A pollutant burden analysis is generally sufficient for other mobile source pollutants. The Environmental Assessment should contain a statement concerning existing air quality in the area of the proposed project, including any history of violations of local, state, and/or federal air quality standards. Predicted carbon monoxide levels and burdens for other pollutants should be presented for existing conditions, future conditions with the proposed project (one year after operation begins), and future conditions without the proposed project. The Environmental Assessment should also include the comments of the local air quality control agency concerning the significance of expected impacts.

Table C can be used to evaluate the significance of potential air quality impacts.

TABLE C

SIGNIFICANCE OF AIR QUALITY IMPACTS

Generally Not Significant	Possibly Significant	Generally Significant
1. Local and/or state air pollution control agency determines that the proposed project is compatible with existing air quality planning and management. 2. Proposed project would not violate national ambient air quality standards or other applicable standards. 3. Proposed project is consistent with the State Implementation Plan for air quality. 4. Proposed project is consistent with the Transportation Control Plan.	1. Proposed project would result in increased pollutant levels, but would not exceed local, state, or federal standards for mobile source pollutants. 2. Proposed project is located in an EPA-designated nonattainment area for any mobile source pollutants and would increase auto and/or bus traffic at specific locations.	1. Project would result in violation of local, state, and/or federal air quality standards for any mobile source pollutant. 2. Project is opposed by local air pollution control agency. 3. Project is not consistent with the State Implementation Plan and/or, if applicable, the Transportation Control Plan.

D. NOISE

1. Sources of Noise

Urban mass transportation projects have the potential to create three kinds of noise impacts: (1) noise associated with fixed transit faciliites (e.g., maintenance and storage facility, transit terminal); (2) noise from traffic diverted due to implementation of the transit improvement (e.g., auto-restricted zone or transit mall); and (3) transit vehicle operating noise--increased noise levels due to operation of buses (e.g., on major new routes, on streets in the vicinity of new maintenance/storage facilities, on exclusive lanes, on transit malls, etc.). The potential for adverse noise impacts from mass transportation projects is greatest when noise-sensitive sites are located in the project area. Noise-sensitive sites include residences, motels, hotels, public meeting rooms, auditoriums, schools, churches, libraries, hospitals, amphitheaters, parks, and other areas where quiet is essential. "Active" parks, such as ballfields, are not generally defined as noise-sensitive areas because their use and enjoyment are not precluded by moderate noise levels. In some cases, commercial areas can be considered noise-sensitive, particularly when ambient noise levels are low and the area is located on a street which carries little traffic and is not a through street.

2. Noise Descriptors

Noise from transportation sources within a community varies in intensity and timing. Unlike highways, where noise is emitted by a continuous or nearly continuous flow of traffic, mass transit systems are characterized by intermittent occurrences of noise that vary in frequency depending on the time of day. The noise descriptor used for most mass transit projects is the

equivalent sound level (L_{eq}). Use of the equivalent sound level is appropriate because this level is sensitive to the frequency of occurrence and duration of noise events, including bus transit operations which may be characterized by infrequent noise. The equivalent sound level is also widely accepted by agencies involved in regulating noise (e.g., the Environmental Protection Agency, the Federal Highway Administration, etc.).

The equivalent sound level may be given for different time periods (usually 1 hour [$L_{eq(1)}$], 8 hours [$L_{eq(8)}$], or 24 hours [$L_{eq(24)}$]), depending on the nature of the project and the period during which most transit activity takes place. For example, noise from a proposed bus storage facility should be reported in decibels as a one-hour L_{eq} for the peak hour of bus activity (i.e., when most buses leave to begin their routes). Bus noise from a proposed transit mall project might be expressed either as a one-hour L_{eq} for the morning or evening peak period or as an eight-hour L_{eq} covering the period of greatest commercial activity. If transit operates during the night when residences might be disturbed, the day-night sound level (L_{dn}) should be used. This descriptor attaches a ten-decibel penalty to noises occurring between 10 p.m. and 7 a.m. when people are most likely to be disturbed by noise.

Residences present a special case; occupants can be exposed to noise for long periods of time and the noise decriptor used must be sensitive to this. However, most noise assessments can be based on a "worst-case" approach in which the peak transit activity period is identified and the noise predicted to result from a project is expressed as a one-hour L_{eq}.

3. Assessment of Impacts

At present, there are no standards to regulate a community's exposure to noise emanating from buses or other transit vehicles. In the absence of such standards, the significance of noise impacts can be evaluated through a comparison of existing (ambient) noise levels with the noise levels projected to result from a project. Generally speaking, an increase or decrease in noise of 3 dBA (L_{eq}) or less caused by a project is considered to represent no significant change. An increase of 10 dBA (L_{eq}) or more is considered a significant impact, whose severity depends on the nearness of noise-sensitive land uses. If the increase in noise ranges between 3 and 10 dBA, its significance will depend upon the existing ambient level and the presence of noise-sensitive sites. For example, an increase of 5 dBA (L_{eq}) in noise within a community would be of greater significance in terms of its potential effects on health and the annoyance it would create in an environment of already high noise levels (70 to 80 dBA) than it would in a suburban or rural environment with lower ambient noise levels (45 to 55 dBA). In general, an increase in noise of 5 dBA due to a project is often used as the point at which the noise impact is considered significant.

By using the following guidelines as a screening technique, the persons preparing or reviewing an environmental assessment may be able to judge the significance of a proposed project's noise impacts without a detailed noise analysis.

a. Noise from Fixed Transit Facilities

To determine whether a detailed noise analysis is needed in the case of a fixed transit facility, the land uses surrounding the proposed project area should be examined to identify any noise-sensitive sites. If the surrounding land use is industrial, there is generally no need for a detailed noise analysis. A bus storage or maintenance facility in an industrial area is usually classified as a Class 2 action, requiring neither an Environmental Impact Statement nor an Environmental Assessment (see UMTA's "Environmental Impact and Related Procedures"). If residential land uses surround the project site, a detailed noise analysis should generally be undertaken. If the proposed project site is within 1,200 feet of a noise-sensitive site with no intervening buildings, it is possible that noise will be increased by at least 3 dBA (L_{eq}) and a detailed noise analysis should be undertaken. If a predominantly solid line of intervening buildings is present, the project site can be within 300 feet of a noise-sensitive site before noise would be expected to increase by more than 3 dBA (L_{eq}) and a noise analysis would be needed. Less than a solid wall of intervening buildings would have only a minimal mitigating effect.

b. Noise Due to Diverted Traffic

In the case of noise due to diverted traffic, the potential for significant noise impacts is dependent upon expected changes in auto and truck volumes, travel speeds, and/or the distance from the noise source to a receptor. A detailed noise analysis is not needed unless the project is expected to modify the above factors to the extent that an increase in noise of at least 3 dBA (L_{eq}) is anticipated. Examples of changes that would yield an increase of 3 dBA (L_{eq}) and for which a detailed noise analysis should be made are as follows:

- A 100 percent increase in hourly auto traffic volumes on one or more streets passing a noise-sensitive site;
- A 100 percent increase in hourly truck volumes on one or more streets passing a noise-sensitive site;
- A 100 percent increase in the combination of hourly auto volumes and truck volumes on one or more streets passing a noise-sensitive site;
- An increase in vehicular speeds of 15 miles per hour on one or more streets passing a noise-sensitive site; and
- A reduction of one-third in the distance between auto or truck traffic and a noise-sensitive site.

An increase in noise due to more traffic can be offset by a reduction in speed or by an increase in the distance from the source to the receptor.

In the analysis of noise impacts due to diverted traffic, [illegible] trucks and cars are likely to follow if they are moved off a street that is given priority for transit (e.g., auto-restricted zone, transit mall) should be investigated.

c. Transit Vehicle Operating Noise

A detailed noise analysis should be carried out for all projects that would result in an increase of twelve buses or more per hour passing a noise-sensitive land use. The probable routes that transit vehicles will take to and from a proposed fixed transit facility should be reviewed with particular attention. Projects that would increase volumes by as few as twelve buses per hour have the potential to create an increase in noise of 3 dBA.

For the case in which bus volumes increase in a mixed traffic environment (autos and buses), but buses do not pass noise-sensitive areas, both the level of service of the roadway and the number of buses as a percentage of total vehicles on the roadway must be examined to determine if a detailed noise analysis is needed. Information about traffic volumes and levels of service can usually be obtained from local traffic engineering departments. In some cases, special traffic counts may be required. In general, a detailed noise analysis is required if buses constitute at least three percent of the total traffic during their peak hour of activity and the roadway is operating at level of service C or worse, or if buses constitute four or more percent of total hourly traffic.

In any event, a detailed noise analysis is required for projects including provisions for the operation of buses on transit-only malls or in other auto-restricted zones.

If a detailed noise analysis is not needed, the Environmental Assessment should provide justification that a survey of noise-sensitive sites was completed and no such sites are in the project area. If noise-sensitive sites are found in the project area, the Environmental Assessment should make the case, if possible, that because of the characteristics of the proposed project, increases in noise are not expected to be discernable at any of the noise-sensitive locations.

If a detailed noise analysis is needed, noise impacts should be analyzed and the results of the methodology employed should be summarized in the Environmental Assessment. The documentation should include:

- An identification of noise-sensitive areas within the project area;

- A description of the project's design or operational features that contribute to the potential impact (e.g., bus start-ups in the early morning, diversion of traffic, large numbers of buses operating on a transit mall);

- A determination of existing ambient noise levels (by monitoring), predicted future noise levels without the project, and predicted future noise levels with the project;

- A discussion of predicted project noise levels with reference to any local ordinance and/or applicable noise standards or guidelines. Standards and guidelines that may apply include: guidelines of the Environmental Protection Agency; guidelines of the American Public Transit Association (rail projects); standards of the Federal Highway Administration (bus projects); and regulations of the Department of Housing and Urban Development (projects affecting HUD-sponsored developments). Additional guidance on applicable standards and criteria is available from UMTA; and

- A discussion of the project's location, design, or operational features that will mitigate potential noise impacts. For many mass transportation projects, mitigation depends primarily upon the selection of an acceptable location for a transportation improvement, rather than the adoption of any specific design measures. Therefore, the documentation should include the influence of potential noise impacts in the selection of the final project site.

Table D can be used to evaluate the significance of the results of an assessment of potential noise impacts. Further guidance on assessing the noise impacts of mass transportation projects is available from UMTA.

TABLE D

SIGNIFICANCE OF NOISE IMPACTS

Generally Not Significant	Possibly Significant	Generally Significant
1. No noise-sensitive sites are located in the project area. 2. Increases in noise levels with implementation of the project are projected to be 3 dBA (Leq), or less at noise-sensitive sites and proposed project would not result in violations of noise ordinances or standards.	Increases in noise levels with implementation of the project are expected to be no greater than 5 dBA (Leq). Determination of significance must consider existing noise levels and the presence of noise-sensitive sites.	1. Proposed project would cause noise standards or ordinances to be exceeded. 2. Proposed project would cause an increase in noise levels of 6-10 dBA (Leq) in built-up areas. 3. Proposed project would cause an increase in noise levels of 10 dBA (Leq).

E. WATER QUALITY

The potential impacts on water quality that should be evaluated are the direct and indirect introduction of pollutants into surface [illegible] water, the alteration of surface drainage patterns, and the involvement of the

proposed project with the water table, either through dewatering or contamination of subsurface waters (e.g., aquifer recharge areas). No detailed analysis is required unless any one (or more) of the following conditions exists:

1. Surface bodies of water are located on or adjacent to the proposed project site;

2. Storm and sanitary sewers are incapable of accommodating projected runoff;

3. Dewatering is required;

4. The proposed project does not include provisions for containing possible pollutants (e.g., oil, grease, chemicals, washwater on the site for proper treatment and/or disposal; or

5. The proposed project is not consistent with the 208 Areawide Water Quality Management Plan, if applicable.

6. The proposed project would result in the disposal of hazardous, polluting, or toxic substances into any body of water.

The above determinations should be made in consultation with the appropriate local agencies (e.g., city engineer, sewer district, 208 agency, local soil conservation districts, Metropolitan Planning Organizations). , Copies of correspondence stating the agencies' determination of potential impact may be included in a Technical Report.

If a detailed analysis of impacts on water quality is required, it should be performed in consultation with the regional office of EPA, the state natural resources agency, and/or the areawide 208 agency (likely to be the Metropolitan Planning Organization or regional council of governments in large urban areas). These agencies should be asked to supply background data on water quality and a determination of the proposed project's impacts in this area.

The Environmental Assessment should identify all bodies of water on or adjacent to the property and describe their present quality. Future water quality, both with and without implementation of the proposed project, should be estimated and compared to federal, state, and/or local water quality standards. Mitigation measures that will be employed to retain excess runoff and/or potential pollutants should be described. The locations of settling ponds used to trap sediment in the runoff from the project area should be noted. The extent of the project's impact on the water table should be documented. If appropriate, the reasons for the project's lack of conformance with the areawide 208 program should be presented.

If the proposed project is located close to a body of water or a wetland, the district office of the Corps of Engineers should be contacted to determine whether the project will require a Section 404 permit. Detailed analysis must be performed for a project requiring such a permit. Under Section 404 of Public Law 92-500, "The Federal Water Pollution Control Act Amendments of 1972," it is necessary to obtain a permit from the Corps of Engineers to locate a structure, excavate, or discharge dredged or fill material in waters of the United States. Such a permit is required for projects that create discharges of more than one cubic yard of dredged material into any stream carrying over five cubic feet per second more than 50 percent of the time, lakes of more than five surface acres, and all wetlands.

If the proposed action requires a Section 404 permit, a detailed description of the project, including its purpose, the use of structures, the types of vessels that will use the facility, methods for handling wastes, the types of wastes to be handled, and the composition and quantity of dredge or fill material, should be furnished the Corps. The Environmental Assessment should summarize the results of the analysis that support the application for a Section 404 permit and the findings of the Corps of Engineers.

Table E can be used to evaluate the significance of potential impacts on water quality.

TABLE E

SIGNIFICANCE OF WATER QUALITY IMPACTS

Generally Not Significant	Possibly Significant	Generally Significant
1. No contaminants from the proposed project would reach nearby bodies of water. 2. Adequate provisions for treatment of possible contaminants have been included in proposed project (e.g., trapping of oils and grease and reuse of wastewater). 3. Storm and sanitary sewers can handle project's flows. 4. Dewatering or recharging of water table is not involved. 5. Proposed project is consistent with the areawide 208 plan, if applicable. 6. Proposed project does not require a Section 404 permit from Corps of Engineers.	1. Proposed project would result in minor contamination of nearby bodies of water, according to the state water quality agency. 2. Dewatering or recharging if water table is involved. 3. The Corps of Engineers requires a Section 404 permit for the project, but comments that only minor impacts are expected.	1. Proposed project would result in violations of federal, state, or local water quality standards. 2. Proposed project would overload storm or sanitary sewer systems. 3. Provisions to prevent contamination of surface waters and/or aquifers have not been adopted. 4. Proposed project is not consistent with areawide 208 plan. 5. The Corps of Engineers requires a 404 permit for the project and expresses concern about possible impacts.

F. WETLANDS

A wetland is a lowland covered with shallow and sometimes temporary or intermittent waters. This definition includes, but is not limited to, swamps, marshes, bogs, sloughs, potholes, wet meadows, river overflows, and tidal overflows, as well as estuarine areas and shallow lakes and ponds with emergent vegetation. Areas covered with water for such a short time that there is no effect on moist-soil vegetation are not included in this definition, nor are the permanent waters of streams, reservoirs, and deep lakes.

The ecosystem of a wetland includes areas that affect or are affected by the wetland itself (e.g., adjacent uplands or regions upstream or downstream of wetlands). An activity may affect a wetland indirectly by disturbing regions upstream or downstream of it or by damaging the water table of the area in which the wetland lies.

Further information about the types, number, and locations of wetlands is contained in Circular No. 39 of the Department of the Interior (Fish and Wildlife Service) or in the inventories of wetlands maintained by various states. To determine the location of wetlands and the possible impact of proposed projects, the U.S. Fish and Wildlife Service, the Corps of Engineers, the National Oceanic and Atmospheric Administration (for coastal areas), and/or the state wildlife or natural resources agency should be contacted.

A detailed analysis is required if the proposed project is located in or near a wetland. This analysis should follow the procedures outlined in the U.S. Department of Transportation Order 5660.1A, "Preservation of the Nation's Wetlands" (promulgated on August 24, 1978). Elements that should be included in the analysis are the locations, types, and extents of wetlands that might be affected by the proposed action and the wetland classification based on the U.S. Fish and Wildlife Service's Circular No. 39. The analysis should include an assessment of the impacts on wetlands and associated wildlife resulting from both construction and operation of the project and measures to minimize adverse impacts and avoid, to the fullest extent possible, drainage, filling, or other disturbance of wetlands and the water resources supplying them. The hydrological resources, fish and wildlife, and recreational, scientific, and cultural uses of wetlands should be considered.

The Environmental Assessment should include statements by the local representatives of the U.S. Fish and Wildlife Service, the Corps of Engineers, the National Oceanic and Atmospheric Administration (for coastal areas), the state wildlife or natural resources agency, and/or any other responsible officials with special expertise, setting forth their views of the project's impact on the wetland, the value of the wetland to the community and the nation, and recommendations concerning the continuation of the project (i.e., whether the project should proceed and, if applicable, any alternatives that should be considered).

If the proposed project would have a significant impact on wetlands, the Environmental Assessment should include a specific finding that there is no practical alternative to avoid impacts on the wetland and that all practical measures to minimize impacts have been included in the project design.

Table F can be used to evaluate the significance of potential impacts on wetlands.

TABLE F

SIGNIFICANCE OF IMPACTS ON WETLANDS

Generally Not Significant	Possibly Significant	Generally Significant
1. Proposed project is not located within or near a wetland. 2. Proposed project does not affect a nearby wetland, according to appropriate agencies.	Proposed project is located in or near a wetland, but includes adequate mitigation measures, according to the responsible agencies, and conforms to the state coastal zone management program, if applicable.	1. Proposed project is located in or near a designated wetland and detrimental impacts have been identified by appropriate agencies. 2. Proposed project is located in or near a designated wetland and measures to minimize adverse impacts have not been included. 3. Proposed project does not conform to the state coastal zone management program, if applicable.

G. FLOODING

The two types of impacts in this category that must be considered are flooding of the proposed project site and flooding induced by the proposed project. A detailed analysis is not required if the proposed project is not located within a floodplain and does not involve changes in the existing pattern of water runoff. Initially, it should be determined whether the proposed project is located within the 100-year floodplain. Maps of the Federal Insurance Administration should be used as the primary reference in making this determination. These maps are available from the U.S. Department of Housing and Urban Development. A Flood Insurance Rate Map (FIRM) or Flood Insurance Study (FIS) Report should be consulted first. If these sources are not available, a Flood Hazard Boundary Map (FHBM) should be referred to. If the latter map is not available or is inadequate, assistance from other local, state, or federal agencies should be obtained so that a precise definition of the floodplain can be achieved.

If the proposed project is located within a floodplain, a detailed analysis must be conducted in accordance with the U.S. Department of Transportation's Order "Floodplain Management and Protection" (42FR 27148, promulgated on April 23, 1979). As detailed in the Order, the analysis must include documentation of the reasons for the project's location in the floodplain, the alternatives considered, and the reasons why these alternatives were not considered practical. A statement indicating whether the proposed project conforms to state and/or local floodplain protection standards must also be included.

A detailed analysis is required for proposed projects which involve [illegible] in the existing pattern of runoff. Changes that could cause or aggravate local flooding--and, thus, require a detailed analysis--include modifications of the drainage system, channelization of existing runoff, and creation of additional impervious surfaces through paving of or construction on a previously permeable surface.

If the proposed project has the potential to induce flooding, the magnitude of the impact should be evaluated in consultation with the responsible local or state agency. The Environmental Assessment should summarize the results of the analysis, including the expected magnitude of induced flooding, the affected area, and the findings of the appropriate local or state agency. Design elements that will be employed to mitigate the impacts of flooding (e.g., retention ponds, diversion structures should be described.

Table G can be used to evaluate the significance of potential flooding.

TABLE G

SIGNIFICANCE OF FLOODING IMPACTS

Generally Not Significant	Possibly Significant	Generally Significant
1. Proposed project is located outside the 100-year floodplain. 2. Proposed project, with mitigation measures (if needed), would not increase flooding. 3. Proposed project would not modify existing pattern of runoff.	1. Proposed project is within a 100-year floodplain, but does not result in a "significant encroachment" as defined in the DOT Order. 2. Proposed project is located within 100-year floodplain and/or would aggravate local flooding, but conforms to state and/or local floodplain protection standards.	1. Proposed project would result in a "significant encroachment" on a floodplain as defined in the DOT Order. 2. Proposed project is located in a 100-year floodplain and does not include adequate mitigation measures. 3. Alternatives to the location in a floodplain have not been considered and have not been shown to be impracticable. 4. Proposed project does not conform to applicable state and/or local floodplain protection standards.

H. NAVIGABLE WATERWAYS AND COASTAL ZONES

Detailed analysis is required only for a project affecting navigation or located within or affecting a coastal zone. If the proposed project is located near a navigable waterway, the U.S. Coast Guard (USCG) should be consulted to determine whether the project will have an impact on navigation. The determination of the USCG, with supporting evidence, should be included in the Environmental Assessment.

The state coastal zone management (CZM) agency or the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce should be contacted to determine whether the proposed project will affect a coastal zone. The term "coastal zone" refers to those coastal waters and the adjacent

shorelands strongly influenced by them that are located in proximity to the shorelines of the several coastal states; such a zone includes islands, transitional and intertidal areas, salt marshes, wetlands, and beaches. In the Great Lakes waters, the zone extends to the international boundary between the United States and Canada and, in other areas, it extends seaward to the outer limit of the United States' territorial sea. The zone extends inland from the shorelines only to the extent necessary to control those shorelands whose uses have a direct and significant impact on the coastal waters.

The Environmental Assessment should include evidence of consultation with the state CZM agency if the proposed action is within or may affect the land or water uses in the area covered by a state CZM program. If a state's CZM program has been approved by the Department of Commerce, the Environmental Assessment should contain a determination of the proposed project's consistency with the approved state CZM program, including a record of coordination, as specified in the Coastal Zone Management Act (P.L. 92-583). If it is determined that the proposed project is not consistent with the state's approved program, the U.S. Secretary of Commerce must formally state that the proposed action is consistent with the purposes or objectives of the Coastal Zone Management Act or must be implemented in the interest of national security. The Environmental Assessment must include this finding, if warranted.

If the proposed project is located close to a body of water, the Environmental Assessment should include evidence that the project would not cause any usurpation of riparian rights granted by state or federal law.

Table H can be used to evaluate the significance of potential impacts on coastal zones and navigable waterways.

TABLE H

SIGNIFICANCE OF IMPACTS ON NAVIGABLE WATERWAYS AND COASTAL ZONES

Generally Not Significant	Possibly Significant	Generally Significant
1. Proposed project does not affect navigation, according to the U.S. Coast Guard.	1. The U.S. Coast Guard comments that the proposed project would affect navigation.	1. The U.S. Coast Guard comments that the proposed project would have a major affect on navigation.
2. Proposed project is not within and does not affect a coastal zone according to the state coastal zone management agency.	2. Proposed project is located in or near a coastal zone, but has been determined to be consistent with the state's approved coastal zone management program.	2. Proposed project is not consistent with the state's approved coastal zone management program.

I. ECOLOGICALLY SENSITIVE AREAS

Ecologically sensitive areas contain natural features that require protection. Such areas include woodlands, prairies, marshes, bogs, lakes, streams, scenic areas, landforms and geological formations, and pristine natural areas. To determine whether a mass transportation project will have an impact on an ecologically sensitive area, the Department of the Interior or the state or

local department of natural resources should be consulted to determine whether such an area exists on or near the proposed project site. The type of project and its location should be reviewed to determine whether any detailed studies will be necessary.

If an ecologically sensitive area is located in the project area, several environmental impact categories may have to be analyzed in the determination of possible significant impacts. Depending on the project's site, impacts on water quality, wildlife, soils, hydrology, flora, fauna, land use, recreational areas, and aesthetics, among others, may have to be evaluated. Local agencies, such as the departments of fish and wildlife, parks and recreation, water resources, and natural resources may have to be consulted to determine the extent of impacts. Alternatives to protect the ecologically sensitive area should be presented in the Environmental Assessment.

Table 1 can be used to evaluate the significance of potential impacts on ecologically-sensitive areas.

TABLE 1

SIGNIFICANCE OF IMPACTS ON ECOLOGICALLY-SENSITIVE AREAS

Generally Not Significant	Possibly Significant	Generally Significant
No ecologically-sensitive areas located within or near the proposed project site would be affected, according to the state and/or local department of natural resources.	1. Ecologically-sensitive areas are located near the proposed project site. 2. Proposed project would result in minor impacts on an ecologically-sensitive area, as determined by the appropriate agency.	The state or local department of natural resources determines that an ecologically-sensitive area would be significantly affected by the proposed project.

J. ENDANGERED SPECIES

To determine whether a mass transportation project will have a significant impact on an endangered species, the list of threatened and endangered fauna and flora published by the U.S. Department of the Interior in the Federal Register should be reviewed in consultation with the U.S. Fish and Wildlife Service (FWS), the National Marine Fisheries Service (NMFS), or other appropriate state or local wildlife agencies. The nature and magnitude of the project and its location should be reviewed with the above-mentioned agency (ies). If it is concluded that the existence or habitat of an endangered or threatened species could be affected by the project, a more detailed analysis should be performed.

The Endangered Species Act of 1973 (Public Law 93-205), 16 U.S.C. 1531, requires that all federal agencies shall, in consultation with the Departments of Interior (FWS) and Commerce (NMFS), carry out programs for the conservation of endangered or threatened species listed by the Department of the Interior. All federal agencies are also required to ensure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of the endangered species or result in the destruction or modification of the habitat of such species to an extent determined by the Secretary

(of the Department of the Interior or the Department of Commerce) to be critical.

A detailed study conducted in conjunction with the FWS for terrestrial and freshwater species, the NMFS for marine species, and/or state and local agencies should include a population count of the species and an evaluation of its habitat, breeding areas, food supply, and natural territory. The Environmental Assessment should describe the anticipated effects on endangered species of the proposed action and of alternatives to it, the nature of the endangered species' habitat, and the designation (or lack thereof) of that habitat as critical by the FWS or NMFS. The document should summarize the results of consultation with the FWS or NMFS and indicate any specific measures, including possible alternative designs or locations, that will be taken to conserve endangered species and to avoid destruction or modification of critical habitats.

Table J can be used to evaluate the significance of potential impacts on endangered species.

TABLE J

SIGNIFICANCE OF IMPACTS ON ENDANGERED SPECIES

Generally Not Significant	Possibly Significant	Generally Significant
No threatened or endangered species are located in the proposed project area, according to the Fish and Wildlife Service or the National Marine Fisheries Service.	A threatened or endangered species is located in the proposed project area, but specific measures (including alternative designs or locations) have been taken to conserve the endangered species and to avoid destruction or modification of the critical habitat.	The existence or habitat of a threatened or endangered species would be significantly affected by the proposed project, according to the Fish and Wildlife Service or the National Marine Fisheries Service.

K. TRAFFIC AND PARKING

Impacts on traffic can occur as a result of the generation of traffic by the proposed action (e.g., a garage) or a change in traffic patterns caused by the proposed improvement (e.g., an auto-restricted zone or transit mall). Issues that should be addressed in this category of impacts include changes in traffic volumes and changes in the supply of parking.

Changes in traffic can influence other impacts--such as those in the areas of air quality, noise, energy, community disruption, safety and security, and historic properties and parklands. Therefore, it is important that the traffic analysis be coordinated with analyses of other impact criteria before any information is collected. All requirements should be known so that one data collection effort will serve all needs for information about traffic.

The streets that will be affected by the proposed transportation improvement should be identified and their functional classification determined early in the assessment process. Data on traffic volumes (average daily and peak hour) should be obtained for these streets. These traffic data should

be collected from readily accessible sources, such as the [illegible] ning Organization (if the project is in an urban area), the local traffic engineering agency, or the state Department of Transportation. New traffic counts should be made only if adequate information cannot be obtained from existing sources. Counts should be factored to represent a common base year (usually one year following the project's completion date).

The traffic generated by the proposed project and changes in traffic resulting from modifications of travel patterns should be forecast on the basis of the proposed action's characteristics. Forecasts should be made for both average daily traffic (ADT) and peak hour traffic. If the peak hour for traffic generated by the proposed action is different from the peak traffic hour on the surrounding street system, estimates for both hours should be made and the worst condition used for the analysis. This traffic should then be added to the base year traffic on the affected street system. If the resultant peak hour volume on a principal arterial is less than 600 vehicles per lane or if the volume on a minor arterial (or collector) is less than 500 vehicles per lane, it can be assumed that an adequate level of service will be maintained and, therefore, additional analysis of traffic impacts is not necessary. If these criteria are exceeded, a more detailed traffic analysis will be needed to measure the magnitude of the impact and to identify possible mitigation measures.

The detailed traffic analysis should be directed by a person with a sound knowledge of traffic engineering principles. The analysis should address not only the project's impacts on adjacent streets, but also its impact on the total street system affected by it. In some cases, a few streets may be negatively affected; conditions on others may be improved by implementation of the proposed action.

If level of service for the streets affected by the proposed project needs to be calculated, the data required are the physical and operational characteristics of the street system (approach width, one-way or two-way operation, and parking conditions), the characteristics of the traffic (turning movements and number of trucks and buses), and the traffic control measures in operation (type of control and characteristics of the control device). Detailed instructions for determining a street's level of service and capacity are presented in Highway Capacity Manual - 1965, Special Report 87 of the Highway Research Board. The word "capacity," as it is used in the Highway Capacity Manual, pertains to the ability of a roadway to accommodate traffic; more specifically, it is the theoretical maximum number of vehicles that may reasonably be expected to pass over a given section of a roadway during a one-hour period at level of service (LOS) E. The Manual defines LOS as a measure of the quality of traffic flow. It ranges from A, which represents low volumes of traffic and free flow, to F, which indicates forced-flow operation with low speeds and frequent stops. LOS D is generally regarded as the minimum acceptable for urban areas. The Environmental Assessment should present the results of level of service calculations with and without the proposed project for affected streets. The level of service calculations can be made at either midblock locations or at controlled intersections.

The Environmental Assessment should indicate whether the proposed project would divert traffic to sensitive areas such as residential neighborhoods, historic districts, or hospital zones. Any diversion of traffic from arterial streets to residential streets should be documented and justified.

Transit improvements in urban areas frequently have an impact on the use and supply of parking spaces. The proposed action may generate a demand for parking spaces on the part of employees or visitors or may eliminate existing parking spaces (e.g., transit mall or exclusive bus lane). If the project's impacts fall into one of the following categories, there will be no need for additional analysis of impacts on parking:

1. The transit improvement provides parking for on-site activities (e.g. parking for maintenance or administrative employees);

2. Fewer than ten parking spaces are eliminated;

3. Fewer than 50 spaces are eliminated and replacement parking is provided, either through new parking facilities or the use of underutilized parking facilities (surplus parking on the project area); or

4. Over 50 parking spaces are eliminated and comparable replacement spaces are part of the proposed action. Comparable parking is that space located no more than an additional 200-foot walk (approximately one-half block) from the parker's destination.

If required, additional analysis of impacts on parking should be designed to determine the use and purpose of the parking spaces being eliminated by the proposed action. The consequences of no replacement of the parking spaces (e.g., inconvenience to parkers, loss of business) should be discussed. Although the proposed action may include the replacement of parking in an amount equal to the number of spaces eliminated, a negative impact may still result if the new location does not serve the same group of users or does not serve them as effectively.

Table K can be used to evaluate the significance of potential impacts on traffic and parking.

L. ENERGY REQUIREMENTS AND POTENTIAL FOR CONSERVATION

The Environmental Assessment should include a discussion of the amount of energy required to operate the proposed project and the following opportunities to conserve energy:

- Shift to a more energy-efficient mode of transportation (e.g., auto users diverted to transit);

TABLE K

SIGNIFICANCE OF TRAFFIC IMPACTS

Generally Not Significant	Possibly Significant	Generally Significant
1. Proposed project would result in total traffic volumes of less than 600 vehicles per hour per lane on principal arterials and 500 vehicles per hour per lane on minor arterials or collectors.	1. Proposed project would result in a decrease in LOS to D or worse.	1. Proposed project would result in a decrease in LOS to E or worse.
2. Proposed project would add traffic to streets operating at level of service (LOS) C or better without lowering LOS to D or worse.	2. Proposed project would add traffic to streets presently operating at LOS D without lowering LOS to E or worse.	2. Proposed project would add traffic to streets that are presently operating at LOS E or worse.
3. Proposed project would result in the loss of fewer than 10 parking spaces and would provide sufficient parking for on-site uses.	3. Between 10 and 50 parking spaces would be lost; replacement parking is not available.	3. More than 50 parking spaces would be lost; **comparable** replacement parking is not available.
4. Fewer than 50 parking spaces would be lost; replacement parking would be provided.	4. Proposed project does not provide parking for on-site activities.	
5. Over 50 parking spaces would be lost; **comparable** replacement parking is available.	5. Proposed project would result in diversion of traffic to local streets.	

- Improvement in energy efficiency (e.g., reconstruction of existing facilities or construction of replacement facilities that are more energy-efficient than present ones);

- Reduction in deadheading of buses and other transit vehicles;

- Improvement in pattern of usage (e.g., more energy-efficient bus operations due to a transit mall, exclusive bus lanes, or a new transit terminal);

- Shift to a more abundant fuel source (e.g., solar energy);

- Reduction in demand for vehicular travel (e.g., construction of a pedestrian mall, joint development); and

- Increase in load factors (e.g., more efficient use of existing bus fleet).

Table L can be used to evaluate the significance of potential energy impacts.

TABLE L

SIGNIFICANCE OF IMPACTS ON ENERGY

Generally Not Significant	Possibly Significant	Generally Significant
Proposed project is expected to result in the conservation of energy required to operate transportation.	The site for a new transit facility will increase overall operational energy requirements.	Proposed project would result in a major increase in energy consumed for transportation.

M. HISTORIC PROPERTIES AND PARKLANDS

1. Section 106

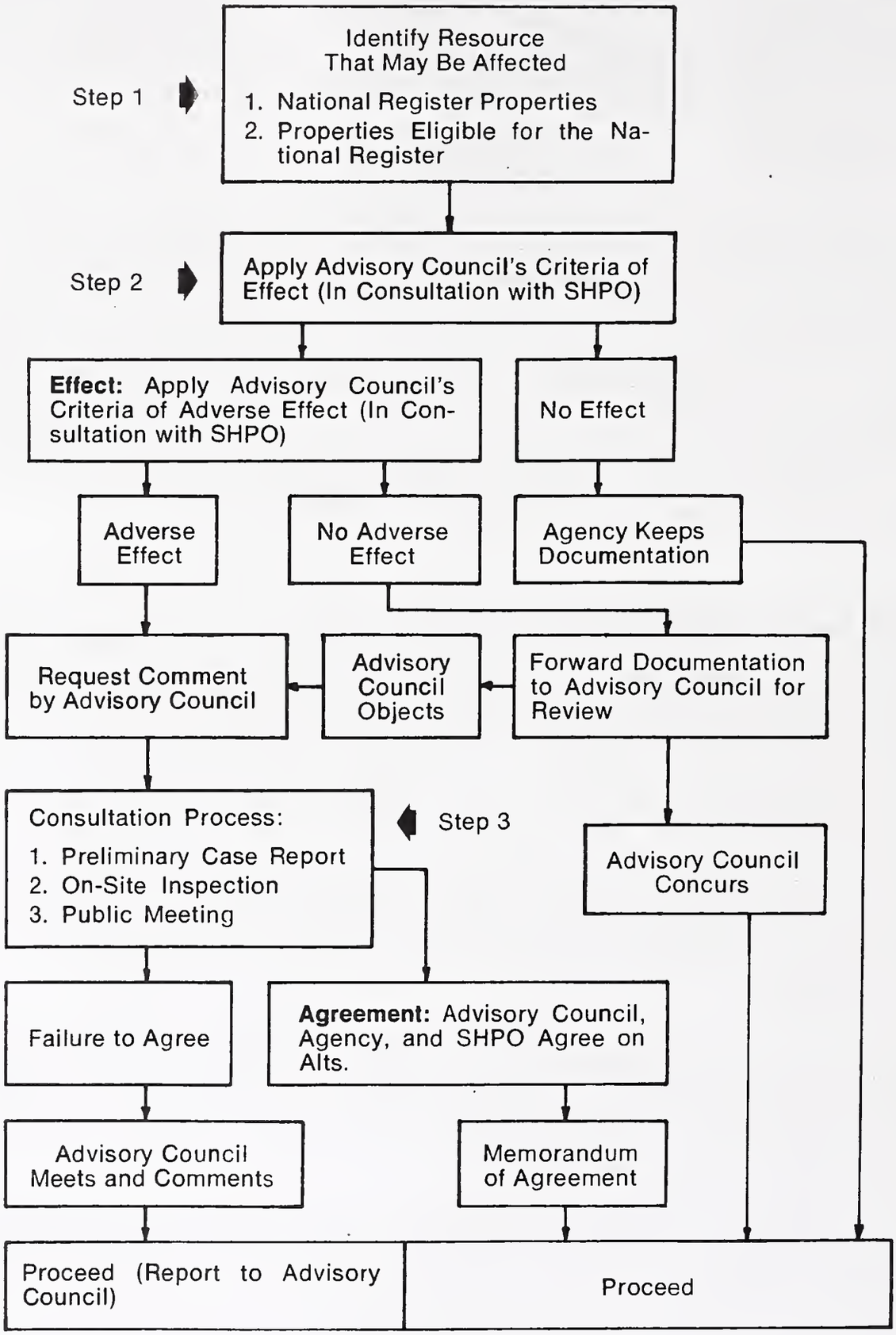
Section 106 of the National Historic Preservation Act requires that federal agencies with direct or indirect jurisdiction over a federal, federally-assisted, or federally-licensed undertaking afford the Advisory Council on Historic Preservation (created by the Act) a reasonable opportunity to comment on undertakings that affect properties included in or eligible for inclusion in the National Register of Historic Places prior to the agency's approval of any such undertaking. The Advisory Council on Historic Preservation (ACHP) has established procedures for the "Protection of Historic and Cultural Properties" (36 CFR, Part 800, contained in the Federal Register of January 30, 1979). These procedures must be followed in determining the extent of a mass transportation project's potential impacts on historic properties.

The first step of the Section 106 process is the identification of all properties that may be affected by the proposed project and that are included in or eligible for listing in the National Register of Historic Places. The National Register, published in its entirety in the Federal Register each February, with monthly supplements published on the first Tuesday of each month, should be consulted first. To identify properties eligible for inclusion in the National Register, the State Historic Preservation Officer (SHPO)--the designated official in each state who acts as liaison for the purpose of the Act--must be consulted. The National Register criteria (set forth in 36 CFR 60.6) must be applied to all properties of historic, architectural, archaeological, or cultural value that may be affected by the project. All properties thought to be eligible (including questionable ones) and that may be affected by the project must be submitted to the U.S. Department of Interior for a determination of eligibility, as specified in the ACHP's procedures.

If the review of the National Register and consultation with the SHPO result in a determination that no sites presently included in the National Register or eligible for such inclusion will be affected by the project, no additional analysis need be undertaken. A detailed analysis is required if such properties may be affected.

The process for compliance with the provisions of Section 106 and the ACHP's procedures is shown in Figure 1. Step 1 is the identification of properties

ADVISORY COUNCIL PROCEDURAL STEPS FOR THE PROTECTION OF HISTORIC AND CULTURAL PROPERTIES



that are listed in or eligible for inclusion in the National Register and may be affected by the proposed project. This step requires consultation with the SHPO. If there are such properties, Step 2 requires that the potential effect of the proposed project on each property be evaluated, in conjunction with the SHPO, through application of the ACHP's Criteria of Effect. In general, a proposed project is deemed to have an effect if it would cause a change in the quality of the property's characteristics that qualify it for inclusion in the National Register. If, in consultation with the SHPO, it is determined that the project would have no effect, the ACHP's procedures will have been fulfilled. The Environmental Assessment must document the finding and copies of correspondence with the SHPO may be included in a Technical Report.

If the analysis indicates that the proposed project will have an effect, the Criteria of Adverse Effect must be applied with the SHPO to determine whether that effect will be adverse (Step 3). If the application of the criteria shows that the proposed project will have no adverse effect, adequate documentation must be submitted to the ACHP for review. This documentation, separate from the Environmental Assessment, should be prepared in accordance with the following outline:

1. Involvement of agencies;

2. Description of the proposed undertaking;

3. Description and significance of the affected property;

4. Inapplicability of the Criteria of Adverse Effect;

5. Views of the State Historic Preservation Officer; and

6. Estimated cost of proposed undertaking.

Unless the ACHP objects to a finding of no adverse effect within 30 days after receipt of adequate documentation, the ACHP's procedures will have been fulfilled.

If the finding of no adverse effect is not accepted by the ACHP or, upon application of the criteria, a finding of adverse effect is made, the ACHP's procedures require the preparation of a Preliminary Case Report and initiation of a consultation process to explore the project's involvement with the historic property. The Preliminary Case Report should be prepared in cooperation with UMTA and submitted with and separate from the Environmental Assessment (Step 4). The Preliminary Case Report should be prepared in accordance with the following outline:

1. Involvement of agencies;

2. Status in grant approval process;

3. Status in NEPA compliance process;

4. Description of proposed undertaking;

5. Description and significance of affected property;

6. Application of Criteria of Adverse Effect;

7. Views of State Historic Preservation Officer;

8. Views of others;

9. Alternatives that would avoid the adverse effect;

10. Alternatives that would mitigate the adverse effect; and

11. Estimated cost of proposed undertaking.

If it is determined that the project will have an adverse effect on a property listed in or eligible for inclusion in the National Register, the Environmental Assessment should include either an executed Memorandum of Agreement or comments from the ACHP, as well as an account of the actions to be taken in response to these comments. The Memorandum of Agreement details the actions agreed upon by the consulting parties to avoid, satisfactorily mitigate, or accept the adverse effects on the property. The process for obtaining a Memorandum of Agreement and the comments of the ACHP are set forth in the ACHP's procedures.

2. Section 4(f)

Section 4(f) of the Department of Transportation Act of 1966 declares that it is national policy to make a special effort to preserve the natural beauty of the countryside, public parks and recreation lands, wildlife and waterfowl refuges, and historic sites. Section 4(f) permits the Secretary of Transportation to approve a project that requires the use of any publicly-owned land from a park, recreation area, or wildlife refuge of national, state, or local significance, or any land from a historic site of national, state, or local significance, only if the following determinations have been made: (1) there is no feasible and prudent alternative to the use of such land; and (2) all possible planning has been undertaken to minimize harm to the 4(f) land(s) resulting from such use. These determinations, with supporting documentation, are set forth in a 4(f) statement.

The detailed 4(f) analysis is required if the project would use one of the above-mentioned types of land or if it would preclude the continued use and enjoyment of the area as a park, historic site, etc. and if such use of the

subject land is considered significant by the national, state, or local official having jurisdiction over it. For historic properties, 4(f) land is significant if it is listed in or eligible for inclusion in the National Register of Historic Places. If the proposed project would not use 4(f) land or if the 4(f) land that would be used is judged insignificant by the appropriate official and UMTA concurs in the determination of non-significance, no further analysis is needed.

If 4(f) land would be used by the project, a 4(f) statement must be prepared; this document is separate from the Environmental Assessment. The statement should be prepared in accordance with the following outline:

1. Description and significance of property;

2. Proposed use;

3. Alternatives;

4. Mitigation measures; and

5. Coordination.

Any similarly-used lands nearby and any unique or irreplaceable qualities of the site should be described. Maps and photographs of the site are an essential part of this description. A statement of significance from the responsible official must be included.

The involvement of the project with 4(f) land should be discussed, with emphasis on the extent and location of the land to be affected, the status of the involvement as temporary or permanent, the kind of facilities that will be built on the 4(f) land and surrounding land, and a detailed discussion of the impact of the project on the 4(f) land. This discussion should include changes in access and changes in the remaining portions of the 4(f) land relative to noise, air, water, and aesthetic qualities. The capacity of the land to continue to support present uses is of vital concern and should be addressed.

To support a determination that there is no feasible and prudent alternative to the proposed use of 4(f) land, the statement should discuss alternatives that avoid the 4(f) land. Alternatives should be analyzed in sufficient detail (including detailed cost estimates, technical feasibility studies, and discussion of unique problems) to demonstrate clearly the reasons why each is judged impracticable or imprudent. A brief assessment of the no-build alternative should be included. To justify the use of 4(f) land, it must be demonstrated that each of the location and design alternatives would involve exorbitant costs or would present implementation problems of great magnitude. If the analysis shows that the 4(f) land is the only feasible and prudent location for the project, the reasons why no other location is feasible should be clearly stated.

After the discussion of alternatives, the mitigation measures that will be employed to minimize the project's impact on 4(f) land must be described. This section should demonstrate that all possible planning to minimize harm to the 4(f) land has been undertaken and should also explain the actions that will be taken to implement this planning. Some of the measures used to minimize harm to 4(f) land include: provisions to compensate for or replace the 4(f) land; design measures to lessen or eliminate adverse effects or to enhance the 4(f) land (using maps and illustrations to show the design measures planned to minimize harm); timing of construction to allow continuing use of the land and facilities; and coordination with the agency having jurisdiction over the 4(f) land describing efforts to gain concurrence and consultations about mitigation measures.

If the land was acquired with federal funds through programs of the Department of Interior, Department of Housing and Urban Development, or Department of Agriculture, the appropriate agency must be consulted about use of the land and proposed mitigation measures.

Table M can be used to evaluate the significance of potential impacts on historic properties and parklands.

TABLE M

SIGNIFICANCE OF IMPACTS ON HISTORIC PROPERTIES AND PARKLANDS

Generally Not Significant	Possibly Significant	Generally Significant
1. In consultation with the State Historic Preservation Officer, UMTA has determined that the proposed project would have "no effect" on historic properties. 2. In consultation with the State Historic Preservation Officer, UMTA has determined that the proposed project would have "no adverse effect" on historic properties and the Advisory Council on Historic Preservation has concurred in these findings. 3. Parkland or other Section 4(f) property would not be used as a result of the project.	1. Minimal use or impact of parkland or other Section 4(f) property would result from the project. 2. Proposed project would result in isolation or modification of access to parkland or other Section 4(f) property.	1. In the Section 106 process proposed project would have an "adverse effect" on a property listed in the National Register or eligible for inclusion in the Register. 2. Proposed project would involve more than a minimal use of/or generate an adverse affect on parkland or other Section 4(f) property.

N. CONSTRUCTION

The Environmental Assessment should briefly describe the construction plan, including the project's proposed starting date and the duration of major phases of construction. The document should address the potential for impacts in the following areas:

1. Noise;

2. Disruption of utilities;

3. Disposal of debris and spoil;

4. Water quality and runoff;

5. Access and distribution of traffic;

6. Air quality and dust control;

7. Safety and security; and

8. Disruption of businesses.

A detailed analysis of these impacts due to construction and the development of appropriate mitigation measures should not be necessary unless the conclusion drawn from the preliminary assessment of impacts is that one (or more) of the following impacts is possible:

1. Noise - The construction site is located: within 1,200 feet of a noise-sensitive land use with no intervening buildings; within 400 feet of a noise-sensitive land use with intervening buildings; within 300 feet of a commercial area with no intervening buildings; or within 100 feet of a commercial area with intervening buildings.

2. Disruption of utilities - The proposed project would cause a utility to a commercial or industrial facility to be disrupted during business hours or a utility to a residential facility to be disrupted for more than 24 hours.

3. Disposal of debris and spoil - Construction would involve demolition of buildings and pavements, disposal of large quantities of excavated material, and the establishment of haul routes on roads other than designated truck routes.

4. Water quality and runoff - Construction would result in excessive erosion and/or the introduction of sediments, wastewater, or chemicals into adjacent bodies of water.

5. Access and distribution of traffic - The proposed project would require that any street be closed; that any major traffic-carrying street be disrupted by closing of a lane(s) or other major interference with the traffic flow (e.g., construction vehicles using adjacent streets or substantial amount of traffic generated), that traffic be diverted through a residential area, or that access to any land use be disrupted.

6. Air quality and dust control - Construction would result in an increased discharge of dust or other particulates into the atmosphere, either through demolition or the exposure of soils.

7. Safety and security - Safety and security during construction are not assured by local ordinances or specifications in the construction documents.

8. Disruption of businesses - One or more nearby businesses would be disrupted during construction due to restriction of access or the creation of inconveniences for patrons.

For impacts requiring additional detailed analysis, the construction specifications, mitigation measures, and alternatives for each of the following areas should be identified:

1. Noise - Specifications should ensure that noise levels resulting from construction and the delivery of materials do not violate any federal regulations (including those of the Occupational Safety and Health Administration) or state and local regulations. The standards to be used for the control of construction noise should be identified. Any sensitive receptors (schools, residential areas, etc.) which may be affected by construction noise should be indicated. In the absence of local controls, the standards in Figure 2 can be incorporated into the construction documents to minimize noise due to construction.

2. Disruption of utilities - If utility services will be disrupted during construction, the type of service, duration of disruption, and area affected should be identified. Alternatives to the disruption of utilities should be considered and their practicability determined. The construction specifications should ensure that any utilities other than those planned for are not disrupted.

3. Disposal of debris and spoil - The method for disposing of debris and spoil and its effects on borrow areas and disposal sites should be identified. Required specifications and permits should be referenced. If possible, the haul route should be coordinated with the traffic engineer or appropriate agency.

4. Water quality and runoff - Measures to minimize erosion and the introduction of sediments, wastewater, and chemicals into surface and subsurface waters should be identified. In areas where erosion is likely to be a problem and in the absence of other controls, construction specifications should be adopted to state that: clearing and grubbing operations should be scheduled and performed so that grading and installation of permanent erosion-control features can follow immediately thereafter, if conditions permit (otherwise, temporary erosion-control measures may have to be employed between successive construction stages); the surface area of erodible earth material exposed at any one time by clearing and

Figure 2

SAMPLE CONSTRUCTION NOISE STANDARDS

For areas outside the construction limits and not designated as special zones by the local agency having jurisdiction, the noise levels from stationary equipment, such as pumps, generators, compressors, parked mobile sources, or a combination of these sources, producing repetitively-scheduled noise lasting more than a few hours shall not exceed the following limits:

Affected Structure	Noise Level (dBA) Daytime	Nighttime
Residential:		
• Quiet residential areas	60	50
• Arterial or multi-family residential areas	80	65
• Semi-residential/commercial areas	85	70
Commercial:	At all times	
• Semi-residential/commercial areas	85	
• Commercial areas with no nighttime occupancy	85	
• Semi-industrial/commercial areas	90	

The noise levels outside the construction limits for nonscheduled, intermittent, short-term noise from mobile equipment shall not exceed the following limits:

Affected Structure	Noise Level (dBA) Daytime*	Nighttime†
Residential:		
• Quiet residential areas	75	60
• Multi-family residential areas	80	65
• Semi-residential/commercial areas	85	70
Commercial:	At all times	
• Semi-residential/commercial areas	85	
• Commercial areas with no nighttime occupancy	85	
Industrial:	90	

*7 a.m. to 10 p.m. daily, except Sundays and legal holidays.

†10 p.m. to 7 a.m. daily, including all day Sunday and legal holidays.

Source: Maryland Department of Transportation.

grubbing should be kept to a minimum (the same should apply to spoil area and erodible haul road); and areas that have been seeded and mulched to control erosion should be cared for until temporary protection is no longer needed (such care may consist of protection against traffic by means of approved warning signs or barricades and repair of areas damaged by wind, water, fire, or other cause following seeding or mulching operations).

Local controls or construction specifications should also ensure that the contractor will take measures to prevent harmful storm water runoff (containing oils, grease, fuels, litter, or chemical pollutants) from discharging into bodies of water. Measures that could be applied include the use of grease traps, dikes, curb walls, retention basins, or sumps.

5. Access and distribution of traffic - If construction will require the temporary closing of streets, construction of temporary access routes, or rerouting of traffic, the duration of disruption, the route of displaced traffic, and the land uses along the closed and proposed routes should be indicated. A significant impact would be one in which closing of a street would require a substantial rerouting or closing of a lane would cause the street to exceed level of service D during the construction period.

The construction of some mass transportation projects has the potential to increase congestion and, in turn, increase pollutant emissions--most notably, local concentrations of carbon monoxide. The adverse impact of construction-induced congestion should be mitigated by well-designed traffic control measures, which include, but are not limited to, the following:

- Provision of maximum number of lanes for peak hour traffic;
- Provision, maintenance, and removal of all required temporary traffic control devices to provide for free and safe flow of traffic;
- Provision of efficient traffic reroutings; and
- Scheduling of construction activities that significantly restrict traffic flow for times other than peak traffic hours (during which emissions of carbon monoxide and hydrocarbons are greatest).

Air quality and dust control - Local, state, and federal air pollution regulations applicable to the project should be identified. To ensure that these standards are met, local or state ordinances or the construction specifications should require mitigation measures to prevent excessive emissions of dust, oxides of nitrogen, and carbon monoxide. The controls should ensure that the contractor will: (1) use appropriate emission control devices on gasoline or diesel construction equipment, (2) prohibit idling and other unnecessary operation of equipment; and (3) equip all machines to prevent or control air pollution in accordance with criteria issued by EPA.

Ordinances or specifications should require that the contractor maintain all work and access areas free from dust. Methods that can be used to control dust include use of tarpaulins on loaded trucks used in construction operations, sprinkling of calcium chloride and/or water on dust-generating surfaces, and light bituminous treatment. Sprinkling should be repeated at intervals to keep all parts of the disturbed area continuously damp. The contractor should be required to have sufficient equipment at the site to carry out dust-control measures. Dust control should not be limited to the immediate area of construction, but to all areas covered by contract work.

7. Safety and security - Safety measures to be taken during the project's construction should be identified. The use of construction barriers and flagmen should be defined. Applicable local ordinances and/or construction specifications should be set forth.

8. Disruption of businesses - If construction will block access to commercial businesses or create inconvenience for their patrons, the type and length of such disruption should be identified. Any mitigation measures and the practicability of alternatives should be presented.

Table N can be used to evaluate the significance of potential impacts resulting from construction.

TABLE N

SIGNIFICANCE OF IMPACTS CAUSED BY CONSTRUCTION

Generally Not Significant	Possibly Significant	Generally Significant
1. Impacts due to construction would be regulated through a local or state ordinance or through environmental specifications in the construction contract. 2. Construction would result in no violations of local, state, or federal air, noise, or water quality standards. 3. Construction plans would include measures to mitigate disruption of traffic and community services such as utilities. 4. Construction would not result in adverse economic impacts on area's businesses.	1. The environmental impacts of construction would not be regulated. 2. Construction would necessitate extensive disruption of traffic and/or community services. 3. Businesses in the project area would experience adverse economic impacts during construction.	1. Local, state, or federal air, noise, or water quality standards would be violated during construction. 2. Traffic congestion due to construction would cause significant economic loss to business community.

O. AESTHETICS

An evaluation of the visual impacts of mass transportation projects should deal with both the community surrounding the proposed site and the design of the project. If the project does not involve construction, alteration, or remodeling of structures, the visual environment will not be affected and additional investigation will not be required. The construction of rail or other fixed guideway systems that do not involve alteration of the three-dimensional

form of the project, as well as auto-restricted zones with a minimal amount of physical changes, are examples of projects that will probably not have visual impacts.

If additional investigation is required, a preliminary screening of visual impacts should be conducted. This screening should consist of discussions with representatives of public agencies and individuals within the community who possess the background and training required to assess the visual impact of a mass transportation project. Possible sources are the local and regional planning agencies, building officials, members of civic design or fine arts committees, and historians. In discussions with public agencies, the unique or important elements of the area adjoining the project site should be determined and the respondent's opinion of the project's compatibility with its surroundings should be obtained. Local building officials should be asked to explore the compliance of the project with zoning controls that preserve views or ordinances to protect the visual character of the community. Building officials should also be questioned about other local codes that may control the appearance of structures. A discussion with historians should be conducted to determine whether the project is likely to interfere with or enhance the view of historic structures or to disrupt or enhance the general character of a setting for an historic structure of district.

If problems are encountered during the preliminary screening (interview) process, additional studies should be undertaken. Problems may be identified through the responses to such questions as: (1) Is the project compatible with the established visual character of the adjoining areas?; (2) Does the project promise to blend into the area, assuming the area has a well-defined positive visual character?; (3) Will the project block a unique view that is valued by the community?; and (4) Does the project introduce a structural element with a scale different from the character of the area?

The more detailed studies should describe the form and function of the existing area and the visual characteristics of the planned improvement. First, in the description of the area, the three-dimensional structure of the community surrounding the project site should be defined and both positive and negative elements in the area's character should be identified. Visual elements indicating uniformity and variety in three-dimensional forms, as well as monotonous and chaotic forms, should be noted, Size, shape, construction materials, orientation of structures, colors, plants, and the scale of street spaces all contribute to the character of an area. Unique views in the vicinity of the project site should also be identified. Views of landmarks or other locally-valued vistas such as historic structures, urban open spaces, and natural amenities should be noted. Photographs, perspective drawings, and models can help define the character of the area.

Second, an effort should be made to describe the principal movement patterns and lines of sight of pedestrians and occupants of vehicles in the vicinity of the project. It is important to note where the majority of pedestrians and motorists will be located when they view the project, their direction of movement, speed, and other elements that can influence their opportunity to see the project. The function of adjoining land uses and the importance of the

views of those occupying these areas should also be considered. Views from residential structures may be accorded more importance than views from retail establishments.

Third, the proposed mass transportation project should be described as thoroughly as possible. The location, size, shape, materials, colors, and orientation of structures and the location and size of landscaping improvements should be noted. Pedestrian routes in the vicinity of the project, including points of entry into any proposed structures, and the visual orientation of pedestrians on the project site should be noted. Parking areas should also be located and their degree of visibility noted.

Table O can be used to evaluate the significance of potential visual impacts.

TABLE O

SIGNIFICANCE OF VISUAL IMPACTS

Generally Not Significant	Possibly Significant	Generally Significant
1. No physical changes are expected to result from proposed project. 2. Any remodeling of existing structures necessitated by project includes blending of the remodeled building into the surrounding area. 3. Proposed structures would be located in areas that do not exhibit a defined visual character (areas made up of different uses, different scales of structures, and with no landmarks or historic structures). 4. Proposed project is compatible with visual character of surrounding area.	1. Proposed construction includes new structures that have a different scale, color, location, and/or orientation from surrounding structures. 2. Proposed project is located within historic district, adjacent to historic structures, or adjacent to major public buildings designed as focal points (e.g., city halls and courthouses).	1. Proposed project is of a scale that contrasts with its surroundings (e.g., contains structures of greater bulk than those in surrounding areas or introduces voids, such as parking lots, into the midst of a developed area of well-defined street spaces). The magnitude of impacts will be greater in areas with a recognized visual character that reinforces their use and its perceived by the community as an asset. 2. Proposed project would disrupt important views (e.g., views of mountains, oceans, rivers, or significant manmade structures).

P. COMMUNITY DISRUPTION

An impact in this category means that important businesses or residential sectors have been disrupted or displaced or that segments of community have been isolated. Physical or psychological separation of residents or activities can dissolve the cohesion within a community.

The potential for a project to disrupt a community should be determined in consultation with the local planning agency. The agency should be asked to help identify communities or neighborhoods that may be affected. The proposed project should be reviewed with the agency in relation to: (1) activity centers and community facility service areas; (2) socioeconomic characteristics; (3) displacements; and (4) circulation patterns and accessibility to services and activity centers. The planning agency's evaluation of potential impacts and the reasons for its conclusions should be obtained. The response of citizens to the proposed project should be noted. If the planning agency concludes that

the project would not disrupt or divide the community and the citizens' response indicates no opposition, no further analysis is needed.

If there is evidence of potential disruption, additional study should be undertaken to assess its possible magnitude. The study should focus on the following characteristics of the community:

1. Neighborhood socioeconomic characteristics-age distribution, social and ethnic composition, degree of dependency on transit, average size and income of families, elderly and handicapped population.

2. Neighborhood community facilities and services-educational facilities and service areas; religious facilities; health care, recreational, and commercial services; and cultural facilities.

3. Community organizations-neighborhood groups, clubs, and service organizations.

4. Neighborhood circulation patterns--autos, transit vehicles, bicycles, and pedestrians.

Existing characteristics and potential impacts should be determined with the help of local planning professionals.

Table P can be used to evaluate the significance of potential community disruption.

TABLE P

SIGNIFICANCE OF COMMUNITY DISRUPTION

Generally Not Significant	Possibly Significant	Generally Significant
1. No displacements would be caused by proposed project. 2. Neighborhood or community boundaries would not be split or altered by project. 3. Service areas of community facilities would not be interrupted by project. 4. Access to community facilities would not be reduced by project. 5. Existing patterns of circulation would not be disrupted by project. 6. Cohesion of community would not be altered by the physical or psychological separation of residents and/or activities: no such "barriers" would be created by project.	1. Changes in development patterns and increased development densities that would result from project are not in character with or on same scale as neighborhood or community. 2. Physical boundaries of neighborhood or community would be altered by project. 3. Service areas and access to community facilities would be slightly altered by project and would require adjustment. 4. There is strong local opposition to or controversy about the proposed project.	1. Major displacements altering the stability of a neighborhood or community or the social and economic character of such an area would result from the project. 2. Community facilities and services would be disrupted through a reduction in access to facilities and a significant alteration of service areas. 3. Natural patterns of circulation would be disrupted. 4. Proposed project would create barriers between segments of the neighborhood or community.

Q. SAFETY AND SECURITY

This section of the Environmental Assessment should describe the measures that would be taken to provide for safe and secure operation of the proposed mass transportation project after its construction. Provisions for such items as fences or security lighting should be mentioned, as well as the name of the agency that will be responsible for maintaining security. Expected improvements in safety and security for transit patrons and others should be documented for all projects.

If the proposed project would modify traffic volumes (e.g., auto-restricted zone or transit mall) to the extent that a detailed traffic analysis is required, the impacts on the number of expected accidents should be assessed. The following types of accidents should be considered: auto/pedestrian, transit vehicle/pedestrian, auto/auto, and auto/transit vehicle. Projects involving significant modifications of pedestrian travel (e.g., pedestrian malls) should include an assessment of the impacts of conflicts between pedestrians and transit vehicles and pedestrians and autos.

Table Q can be used to evaluate the significance of potential safety and security impacts.

TABLE Q

SIGNIFICANCE OF IMPACTS ON SAFETY AND SECURITY

Generally Not Significant	Possibly Significant	Generally Significant
1.Proposed project includes adequate provision for safe and secure operations.	Proposed project would pose unusual safety or security problems.	1. Proposed project would not be adequately secured after construction.
2. Proposed project is expected to reduce auto, transit, and/or pedestrian accidents.		2. Proposed project would have a negative impact on the safety and security of transit patrons.
3. Proposed project is expected to improve the safety and/or security of transit patrons.		3. Proposed project is expected to result in increased auto, transit, and/or pedestrian accidents.

R. SECONDARY DEVELOPMENT

Some urban mass transportation projects, such as malls and terminals, may have the potential to induce secondary development in their immediate vicinity. The potential for such development and its expected impacts should be reported in the Environmental Assessment.

Secondary development can be thought of as changes in land use that could be fostered indirectly by the implementation of a mass transportation project on properties adjacent to or near it. Such land use changes are not under the control of the implementing transportation agency, but represent a desire by other property owners in the vicinity of the project to change the use of their land.

The potential of the proposed project to induce secondary development should be evaluated in consultation with local planning and development agencies. If it is determined that, due to the nature or location of the project, no secondary development is likely to occur, no further analysis is needed. The Environmental Assessment should document the process of coordination with and opinion of the local agency consulted. On the other hand, if the transit project or the activities and events associated with it is likely to accelerate changes in the development pattern of adjoining properties, additional studies should be carried out to investigate the potential impacts of such changes.

Secondary development may conflict or conform with existing land uses and officially adopted plans. Such development should be evaluated in terms of its impact on community development patterns, elements of the community's infrastructure, and socioeconomic characteristics of the neighborhood and community. The analysis should include:

1. Examination of potentially affected properties to determine those in a condition that will be susceptible to change and those in a condition that will resist changes in their form of development, including information on land uses and conditions of structures on parcels adjoining and in the vicinity of the project site and a socioeconomic profile of areas likely to be affected by secondary development.

2. Identification of sites for potential secondary development based on the analysis of their susceptibility to change.

3. Identification of land development projects proposed by the public or private sector that could be positively or negatively affected.

4. Determination of the degree of conformance of potential development to locally adopted community plans and to controls placed by the zoning ordinance.

5. Determination of the extent of potential impacts, or community disruption, that could result from secondary development, including:

    a. Acquisition of land and required displacements.

    b. Impacts on land values.

    c. Impacts on utilities, community facilities, and traffic.

    d. Impacts on employment and accessibility to jobs.

Table R can be used to evaluate the significance of potential impacts caused by secondary development.

TABLE R

SIGNIFICANCE OF IMPACTS ON SECONDARY DEVELOPMENT

Generally Not Significant	Possibly Significant	Generally Significant
1. Proposed project would not generate secondary development.	1. Proposed project would generate a demand for secondary development that may conflict with the comprehensive plan; however, design features would mitigate adverse impacts.	1. Proposed project would induce secondary development that is inconsistent with the comprehensive plan and surrounding development.
2. Proposed project may generate a demand for secondary development, but evaluation by local planning agencies indicates that, if such development occurs, it will likely be desirable and in conformance with adopted public land use plans.	2. Secondary development would require a change in zoning that is supported by local planning agencies.	2. Secondary development would result in higher densities that are planned for or desirable in the areas surrounding the proposed project.
3. Displacements would not result from secondary development.	3. Secondary development would require minor adjustments in established circulation patterns.	3. Secondary development would place a demand on utilities that exceeds capacities; public infrastructure is not adequate to support anticipated secondary development.
		4. Secondary development would increase congestion, reduce accessibility, or otherwise disrupt the services and activities of neighborhood or community.
		5. Secondary development would increase traffic and disrupt existing circulation patterns.
		6. Secondary development would consume land previously designated for public uses, such as community centers, schools, parks, etc.
		7. Secondary development would consume prime agricultural lands that are not designated for urban development by the community's comprehensive plan.
		8. Secondary development would not be served by adequate community facilities or services.
		9. Secondary development would cause displacements, or other impacts such as air quality, noise, or energy, in addition to those generated by the transit project.

S. CONSISTENCY WITH LOCAL PLANS

The comprehensive plan and any other specific land use and transportation plans for the local area should be briefly described in the Environmental Assessment as they pertain to the proposed project. The agencies responsible for the plans should be asked to comment on the compatibility of the proposed project with the plans. If the proposed project is consistent, no further work need be done. Contacts made should be documented in the Environmental Assessment.

If the proposed project is not consistent with local plans, the elements of the plan that are in conflict should be identified. The appropriate planning agency should be contacted to determine whether it would be supportive of an amendment to the plan. Correspondence from the agency citing support (or the lack thereof) and outlining the amendment procedure may be included in a Technical Report.

Table S can be used to evaluate the significance of potential impacts on local plans.

TABLE S

SIGNIFICANCE OF CONSISTENCY WITH LOCAL PLANS

Generally Not Significant	Possibly Significant	Generally Significant
Local agencies have determined that the proposed project is consistent with the comprehensive plan and other applicable land use and transportation plans.	Proposed project is not fully consistent with local plans, but does warrant a favorable change in such plans.	Proposed project conflicts with local plans. Appropriate agencies do not favor amendment of the plans.

APPENDIX

SAMPLE COVER SHEET FOR FINDING OF NO SIGNIFICANT IMPACT

FINDING OF NO SIGNIFICANT IMPACT

(Proposed Project)
(Project Location)
(Grant Applicant)
(UMTA Project No.)

Based on the attached Environmental Assessment, it is the Urban Mass Transportation Administration's finding that there are no significant impacts on the environment associated with the development and operation of this proposed project.

By: _____
(Approving Official)

Date: _____